

The new scholastic landscape: exploring a value sensitive design approach to create empathic school environments for children with ASDs

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Abstract

Current school environments are static and offer little flexibility for educating individuals with diverse needs, such as children with autism spectrum disorders (ASDs). Integrating ambient technology (AMI) into school buildings potentially enables creating flexible, dynamic and sensitive environments that are able to anticipate on the various needs, preferences and feelings of this group. Following the Responsible Research and Innovation (RRI) approach, designing such 'empathic' environments requires incorporating relevant values of future users in these technologies. I.e., the design of new school environments calls for a value-sensitive design approach.

However, since humans and technologies are part of heterogeneous networks of use practices in which they are mutually engaged in shaping and constituting each other (Akrich 1992, Latour 1992), incorporating values in the design of technologies does not guarantee they work out accordingly in practice. Moreover, technologies have a 'mediating' role in human practices and reconfigure social practices and interactions of users with their environment, including the (ethical) values that are inscribed in these technologies (Verbeek 2005; Verbeek 2011; Kudina and Verbeek 2019). It is therefore desirable to enable future users to reflect on the social and ethical aspects of these values early on in the design process of these innovations, especially when the needs of future user-groups are diverse.

This paper presents the initial findings of our research project aimed at exploring, translating and processing values that play a key role in educating children with ASDs in their school environment. For this, we applied the conceptual framework for creating empathic environments from Mohammadi (2017) to the design of speculative and tangible objects which together provide a glimpse at such an environment that focusses on addressing their diverse needs. By presenting the tangible products during an exhibition for people involved in educating children with ASDs future implications and benefits will be imagined. By doing so, the project aims to anticipate undesirable social and ethical consequences of these innovations early on in the design process to increase their successful implementation in school environments of the future.

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